Blue Ridge Mass Appraisal Co. LLC

Property Valuation Procedure

CAMRA Valuation Process

Dwelling Valuation Model Explanation

A valuation model is a formula driven system of value determination using standardized rate and data tables derived from an analysis of local market sales. All modern Mass Appraisal valuations are conducted through the use of some system of value modeling.

The main purpose of the valuation model is to provide a consistent and uniform framework by which the value of any particular dwelling can be determined. Because all pertinent value rates and tables are derived from local market sales, the final value determinations will, by necessity, be relevant to those same local market conditions.

The foundation of any valuation model begins with the analysis of the recent sales data. The appraiser must establish which units of comparison have the most significant correlation to the overall value determination for the property type in question. For example, Land sales are typically evaluated on the basis of a Unit Price per Acre. Buildings are evaluated on a Unit Price per Square Foot.

Because every property is unique, it is critical that the Value Model have sufficient scope to accommodate as much property variability as possible. An example of variability would be the difference in Property Value attributable to differences in Land Value. For example, assume two absolutely identical structures exist on adjoining lots. Both structures have 2,200 sq ft. of size. Lot A has 1.5 Acres and has a market value of $50,000, while Lot B contains 5.0 Acres and has a market value of $125,000. If the Value Model was only based on the Building Size, then both properties would have an identical value. Obviously, this is ridiculous, so the Value Model would have to be expanded to accommodate the value difference attributable to the Land component. This example is easily expanded to encompass other property characteristics such as differences related Garages, Basements, Central Air Conditioning, etc.

The Value Model can therefore be regard as a linear mathematical representation of the property value based upon its individual component parts. Another way to consider this is to remember that the 'Sum of the Parts equals the Whole'. Thus the value of the land would be added to the value of the site improvements which would then be added to the value of the individual structural component parts until all pieces of the parcel are accounted for.

The valuation model then becomes a frame work upon which the sales can be evaluated. In this way, the individual unit rate comparisons can be made which allows for the development of the appropriate rate tables. Conversely, once the rate tables are established, the value frame work becomes the road map to 'build' an individual subject value using its unique component characteristics.

The valuation procedures outlined in the beginning of this document provide a description of the CAMRA value model frame work. As indicated, the structured analysis of value using this model will result in an equitable value determination. This is to say that because all properties are valued using the same model criteria, then the values are uniform and equitable, and are based on local market data.

Because the individual rate tables and value components have been derived using the value model frame work, it is **critical** that the assessor adheres to the value procedure as established. Differences of opinion can arise as to how or why particular elements are considered or valued, however once established, the fundamental procedure must be maintained. It must be kept in mind, that the analysis of the sales is done using the uniform model frame work for the purpose of establishing consistent and equitable unit rate tables.

The appraisal process uses three basic approaches to value, Cost, Market, and Income. The following is a brief outline of the three approaches:

The Cost Approach is based on the premise that the value indication is derived by estimating the current cost of construction for the reproduction of, or replacement for, an existing structure. Added to 'bricks & mortar' cost is an appropriate allowance for overhead and profit. The final total cost new is then adjusted for depreciation to arrive at the depreciated value for the structure. The accurate determination of depreciation, especially in older structures, makes the Cost Approach one of the weaker methods of value determination.

The Income Approach is founded on the idea that value is a reflection of the capitalized present worth of a future income stream. It is most appropriately used in the analysis of income producing properties, as the economic incentive for ownership of this class of real estate is the receipt of future income.

The Market Approach is the primary approach to value used in the appraisal field. This approach is based upon direct comparison of a subject property against sales of similar properties. In making this comparison, allowances for differences both positive and negative between the subject and the comparable are made so that the adjusted sales price of the individual sale is reflective of the subject.

The valuation model used in the CAMRA system is in fact a market driven pricing model whereby the unit rate elements are derived from the analysis of market sales rather than either a cost manual or interviews with local contractors and building

supply dealers. In an effort to make sure that the derived rate structure has relevance to local costs, heavy emphasis is placed upon the analysis of the sales of new structures. This is because sales of new structures are not affected by depreciation.

One key component in the sales analysis is the impact of time. Most reassessment projects take a number of months to complete. The initial sales analysis and rate structure is normally based upon sales which have occurred in the months and years, sometimes as much as up to four years, immediately preceding the start date for the project. With the date of valuation being up to eighteen months in the future, it is imperative that the sales be continually monitored to make sure that the final value projections remain valid and that significant changes in the general appreciation or depreciation trends are not taking place.

Another important consideration to keep in mind is that not all properties increase or decrease in value over time at a uniform rate. This is why it is difficult to merely 'Trend' values up or down in the derivation of new assessment values. Certainly, if the Real Estate market would behave in this manner, lenders would have no need to have properties appraised for lending purposes since all inflationary and deflationary pressures affecting individual properties would be standardized and uniform. Analysis of actual sales data will quickly reveal that even amongst generally homogenous property groupings, individual properties will increase and decrease in value at different rates.

The date of valuation for the typical appraisal done for a lender is the date of inspection. The date of valuation for an assessment is the effective date of the assessment which may be as much as eighteen months into the future. It is for this reason that the sales which occur throughout the course of the project must be continually analyzed. At the end of the project, the most recent sales data can be incorporated in the overall sales analysis and the recent sales can then be re-examined to see how the initial value model and projects relate to actual market evidence. At the same time, adjustments to the initial value model can be made to reflect the reality of the then current market conditions.

The true test of relevance for any value model will of course be measured by how accurate the model is at predicting value. The most appropriate and widely used measure of assessment to value correlation is the Assessment Sales Price Ratio (A/S ratio). In its simplest form, the A/S ratio provides the ratio of the Assessment Value divided by the Sales Price. Thus, if a property which is assessed for $150,000 sells for $150,000, then the A/S ratio is said to be 100% ($150,000 / $150,000 = 1.00 or 100%). If that same property were assessed for $175,000 then the A/S ratio would indicate 117% ($175,000 / $150,000 = 1.17 or 117%). Conversely, if the same property were only assessed for $125,000 then the A/S ratio would only be 83% ($125,000 / $ 150,000 = 0.83 or 83%). Therefore, when the assessed value is less than the sales price, the A/S ratio will be **less than** 100% and when the assessment value is greater than the sales price, the A/S ratio will be **more than** 100%.

In an effort to monitor and measure assessment performance, the A/S ratios for all current sales are computed. The sales prices of the individual sales must be time adjusted to bring them up to one consistent point in time. By computing the A/S ratios for the time adjusted sales prices using the projected assessment values, the resultant ratios will more accurately reflect the relationship between the assessed values and the current market values. Having computed the individual ratios, they must be ranked in order of magnitude. Because the final assessment reflects the values of the property as of the effective date of the assessment, the final assessment may include the value of a new dwelling while the associated sales price was merely for the land. This would have the effect of giving a skewed result which could affect the performance statistic analysis. In an effort to eliminate 'outliers' from the statistical performance analysis, only sales which have a ratio of between .50 or 1.75 are considered. Sales which have ratios within this range have been found to be the most reflective indicators of accuracy in the measurement of assessment performance.

Having developed a statistical ranking for the population of sales, quality analysis can then be made on a statistical basis. Measures of central tendency such as the Mean A/S ratio, and Median A/S ratio can then be used to measure accuracy of assessments for the entire project or small sub populations of specific property types. The most appropriate measure of central tendency is considered to be the Median A/S ratio. Having ranked the individual ratios in order of magnitude, the Median A/S ratio is found at the middle ranking such that 50% of the rankings lie above the Median and 50% lie below. The determination of variability about the Median is measured by analysis of the Coefficient of Dispersion (COD). This statistic measures the magnitude of difference between the individual A/S ratio and the observed Median A/S ratio. The COD is significantly impacted by the degree to which the land and improvement types in a jurisdiction are diversified. The more diverse the higher the acceptable COD. Every effort is made to achieve a COD of between 10% to 15% in areas of limited property diversity, and between 15% to 20% in areas of wide diversity. Land sales being typically more susceptible to wide variation will often reflect a higher COD. The number of valid sales in the analysis population is another important factor which can have a great impact on the measurement of the COD.

In order to begin the development of a local valuation model and rate structure, it is important to stratify the known sales into appropriate groupings of similarity. For example, only 1 story dwellings would be analyzed to determine the 1 story rates while 2 story sales would be used for 2 story rates. Each sub population would also be examined for further sub groupings such as exterior siding type, Brick versus Frame, number of Bath Rooms, etc.. Once the population of sales has been stratified into groupings of similarity, then the sales must be further broken down into appropriate units of comparison. The most common or basic unit of comparison is of course the unit price per square foot. By analyzing the individual time adjusted sales back to the basic unit price level, the resultant unit prices can then be developed for each of the structure types. From this analysis, the rate tables are developed.

As noted, the predominant unit comparison value is the unit price per square foot of the main structure. In addition to the basic structural value, unit rates for component structural elements such as basements, porches, finished basements, garages, decks, carports, etc., must also be developed. Derivation of the unit prices for the individual structural elements is often complicated by the consideration that the marginal contributing value of these individual structure elements will often vary. Typically, the individual unit rates for these component structural elements is developed using the information derived from the review of published cost indexes as well as discussions with local contractors etc. Keeping in mind that unit cost values obtained from local contractors has been shown to be the least representative source of marginal contributing values for structural sub components, the preferred method for sub component rate determination is to use your best judgment based on experience and local sales analysis, to derive rates which are reasonable and appropriate. The derived rates are then used in combination with the base unit rates in the testing and analysis of the time adjusted sales outlined above to derive the final rate structure.

Having developed the rate structure for the varying types and classes of properties, the rates can then be applied against the known sales to determine how accurately the proposed rate structure is at reflecting the value of the individual structures compared with their known sales prices. Using these individual value estimates to develop the A/S ratio statistics, adjustments to the rate structure can be made on an iterative basis until the final rate structure is adopted.

Keep in mind that throughout this process, the base rates and or the sub component element rates may change causing an adjustment to land value which may cause an adjustment to depreciation estimates, etc. The process of sales analysis and rate derivation is complex and requires much attention to detail. Consideration to local market trends and conditions must be given throughout the process so that the final adopted rate structure is as representative of the current market value level as possible.

Most of the discussion outlined above pertains to the derivation of the rate structure primarily related to objective property elements. Adjustments related to the subjective property elements such as structural quality, depreciation, location, etc. is often difficult to determine. By definition, consideration of these factors is more related to quality and value judgments made by the market which are not directly related to the cost. By analyzing a large number of sales it is possible to develop some feel for how the market considers the subjective value components and how these considerations must be incorporated in the valuation model by the use of appropriate adjustments etc.

In the end, it is critical that whatever conclusions are made with regard to the final valuation model, rate tables, subjective quality criteria, etc. the application of the derived rates within the valuation model against properties which are known to have been recently sold is the only true test for the accuracy of the valuation model as it attempts to represent the market as a whole. Arguments related to points of emphasis such as saying the basement rate is too high relative to the porch rate etc., should be ignored so long as the statistical tests outlined above provide the necessary verification that the rates and

model chosen produce value estimates against the known sales which are representative and fall within acceptable guidelines and statistical parameters.

Having developed and tested an initial value model at the beginning of the project, it is imperative that sales which take place during the long field inspection phase be constantly monitored and tested within the framework of the initial valuation model. As the project nears completion, the new sales should be incorporated in a final value model review to make whatever adjustments and changes to the value model the final sales review indicates so that the final value conclusions reflect the most current market conditions.

Basic Valuation Process

The following outline is a brief explanation of the basic valuation process to be used in the determination of value for residential dwellings using the standard CAMRA rate tables. This explanation is somewhat generic, and sample rate table examples will be incorporated in this document.

Step No. 1 - Determine Story Height

The first step to dwelling valuation involves the correct determination of the subject story height. The appraiser must ascertain the predominant story height of the structure; this forms the basis for all further calculations. The three main categories are 1 story, 1.5 story, and 2 story dwellings.

Split Level and Split Foyer dwellings are rated as if they are 1 story dwellings. They are considered to be 'raised ranch' style dwellings. Please keep in mind that such dwellings normally have finished lower levels which must be valued as 'finished basement' area.

Because all calculations are based upon **Total Building Area**, a 2 story dwellings which has attached wings of 1 story or 1.5 story would be valued using the 2 story rate table. Similarly, a 1.5 story dwelling with attached 1 story wings would be rated using the 1.5 story table.

The accurate determination of upper floor living area of 1.5 story style dwellings is obviously difficult based upon an exterior only inspection. Primarily, 1.5 story structures have upper floors which are not as wide as the full first floor width. Further, most 1.5 story structures have 'knee wall' which are typically half normal wall height, with the ceiling sloping with the roof joists running to the center peak of the roof, or to a point of normal ceiling height. Typically, the upper floor of a standard 1.5 story dwelling would be half as wide as the 1st floor width. Thus a 1.5 story dwelling which has a base foot print area of 24' x 40' on the 1st floor would have an upper floor area of 12' x 40'.

Adjustments to upper floor area must be made by the appraiser to accommodate the existence of dormers, open cathedral ceilings, unfinished area, low pitch roofs, etc. The final determination of the partial story floor area percentage will of necessity be a best guess estimate.
If questions exist as to the exact percentage determination, either consult the project supervisor or find similar structures in the area to use as a guide.

The 1 story rate table incorporates all structures up to 1.2 stories. The 1.5 story rate table is used for all structures 1.2 story to 1.9 stories. The 2 story table accommodates all structures with story height greater than 1.9 stories.

Step No. 2 – Determine Predominant Exterior Wall Type

As you will note, the dwelling rate tables are divided into three Rate Categories, based on exterior wall types. When inspecting the structure, the appraiser must determine the exterior wall type which is most prevalent. For example, a 1 story dwelling with a Brick Front but Vinyl siding on both ends and the rear wall would be considered to have mostly Vinyl Siding.

The following is a listing of the most common Exterior Wall types currently in the system. They are listed with the appropriate Rate Type Category.

Type 1 Exterior Wall Descriptions

Aluminum	Comp.Shingle	Metal	Wood Shingle
Asbestos	Frame	Permastone	Wood Siding
Asphalt	Hardboard	Steel	
Board & Batten	Log	Vinyl	
Cedar	Masonite	Vinyl w/ Brick	

Type 2 Exterior Wall Descriptions

Brick
Concrete Board
Dryvit
PreCast Concrete
Stone

Type 3 Exterior Wall Descriptions

Cinder Block
Concrete Block
Brickcrete Block
Stucco

Step No. 3 – Determine Total Area

The most critical item used in the valuation process, is the **Total Area.** Specifically, the total living area of the dwelling excluding such areas as Porches, Garages, Patios, etc. Obviously, the calculation of the area would begin with an accurate measurement of the structure. It will be assumed for purposes of this discussion that the appraiser is knowledgeable as to proper measuring technique.

As indicated in Step No. 1 above, it will be necessary to identify and segregate the different building components making up the structure, as well as correctly determining the story height of the individual sections. Once each of the building segments has been identified, and the area correctly computed (using the story height determination), then the **Total Area** is derived by the summation of the areas of the component sections.

The following is a listing and brief description of the CAMRA Building Section code definitions which are used in the determination of total building area:

BASE - **Base Section -** This is the building section which the appraiser has determined is the 'Main' structural element. Note: This has nothing to do with 'Basement' area. It is merely the most prominent building section.

ADD - **Addition** - This section type refers to those structural sections which are attached, or added to the 'Main' structural element. This section type may or may not have 'Basement' area under it. Care must be taken to ascertain the existence of 'Basement' area so that the 'Basement' area computation is made correctly. An example would be a 1 story wing attached to a 'Main' 2 story Base Section.

NBAD - **No Basement Addition** - This section type is the same as the ADD listed above
with the exception that it is specifically known that this section is built over a 'Crawl Space' or 'Slab' foundation. Such section will not have 'Basement' area and will not be included in the 'Basement' area computation.

LAG - **Living Area Above Garage** - This section is similar to the NBAD listed above, and as the name suggests, it is used to identify the finished living area of rooms built above a Garage. Please note that should the area above the Garage have a permanent staircase but is at present **unfinished** then such area should be classified as **Attic** (ATTC) so as not to be included in the final total finished living area.

OH - **Over Hang** - This building section is 'Cantilevered' out away from the main foundation area. It by definition does not have any foundation support below and as such can not have any basement area beneath it.

Step No. 4 – Determine Basement Area

It is necessary when conducting the physical inspection of the property that the appraiser determine as accurately as possible the Basement Area, if any, which is under the dwelling. Keep in mind the CAMRA system values all Basement Area as unfinished area. Any finished basement area is valued in addition to the total value of the unfinished area.

Because the basic rate structure assumes the structure is built on a 'Crawl Space' any basement area must be valued based upon its unit rate. There are two special foundation types which are considered inferior to the standard crawl space and must be valued with a negative adjustment. This is the allowance for a 'Concrete Slab' foundation and the allowance for a 'Pier' foundation. Please note that the 'Pier' type foundation is typically associated with the short stacked rock or cinderblock foundations typically found under manufactured housing or many older style low quality dwellings.

These 'Pier' foundations may or may not have skirting and are often found to be open to allow the free passage of air and or minor water flooding. Refer to the standard allowance table to ascertain the correct unit rate adjustment.

Step No. 5 – Determine Finished Basement Area and Quality

As in Step No. 4, the appraiser must determine the Finished Basement Area during the property inspection. This is obviously a difficult task and must by necessity involve some educated guess work when no one is at home to provide the information. After calculating the Finished Area, the appraiser must also determine the appropriate rate per square foot to value. Please note that the rate per square foot can vary widely and is very much affected by the overall quality of the construction, apparent condition, etc. If you can not accurately determine a rate per square foot, please refer to the default rate from the rate table and adjust it accordingly.

Step No. 6 – Determine Bathroom Fixture Count

The basic rate structure will include an allowance for a standard number of full and half bathrooms. For example, some localities may have a rate structure which assumes the rate structure includes the value for 1- full and 1-half bath as standard. If a particular dwelling unit has more bathrooms than the standard then a positive adjustment must be made. If the dwelling has fewer bathrooms, then a negative adjustment must be made. For purposes of clarification, please assume the following guidelines:

Full Bath = Three fixtures standard
Half Bath = Two Fixtures standard

The value model is based on Fixture Count. In the example above, a dwelling have 1 full and 1 half bath would by definition have a total of five (5) fixtures. By reference to the outline of standard rate assumptions, a price per fixture rate will be shown. By calculating the total number of 'Full' and 'Half' bathrooms, the appropriate adjustment can be computed. For example, a dwelling having 2 Full and 1 Half bath would have a total of eight (8) fixtures (2 Full Baths @ 3 fixtures and 1 Half Bath @ 2 fixtures). By subtracting the standard number of fixtures (in this example 5) from the total fixture count and multiplying that difference by the rate per fixture, as $800, then the correct adjustment would be calculated to be $2,400 (8 total fixtures less 5 standard fixtures equals 3 extra fixtures at $800 each or **+$2,400** total adjustment). Similarly a dwelling having only 1 bath would have to be adjusted downward to offset the absence of the 2 fixtures assumed in the basic rate for the missing half bath. Using the example above, this would result in a -$1,600 adjustment (3 total fixtures less 5 standard fixtures equals -2 missing fixtures at $800 or **-$1,600** total adjustment).

Please keep in mind that for purposes of our analysis, a Bathroom which has a standard sink, toilet, and a shower stall only, with no 'Tub' will be counted as a 'Full' bath. Many landowners consider such bathrooms as 'Half' baths, so care must be taken when questioning landowners during the inspection to ascertain the correct number of fixtures.

Some systems make adjustment and/or allowance for Kitchen Sinks and Hot water heaters in the Plumbing fixture count. CAMRA assumes the existence of both in the base rate structure. It is understood that in many cases, especially in finer quality homes, the bathrooms may include 'double sinks', 'bidets', etc. It is anticipated that the value of such additional fixtures would be assumed by the adjustments made to the Class/Factor.

Step No. 7 – Determine Heat Type

The standard rate structure typically includes an allowance for 'Central Heat'. This implies that the dwelling has some form of heat which uniformly applies to the entire living area. Because the basic rate structure includes the 'Central Heat' an adjustment based upon total living area must be made when the heating system does not exist, or if the heat is provided by some non-uniform system such as a floor furnace or a wall furnace. Refer to the standard allowance table to ascertain the correct unit rate adjustment.

Step No. 8 – Adjust for Air Conditioning

The standard rate structure does not include an allowance for air conditioning. It will be necessary to check for the existence of air conditioning during the field inspection. Please note that 'Window' unit type air conditioners are not considered. Only 'Central' air conditioning is accounted for. One exception to this is the ability to recognize the 'Partial' central air conditioning. In such cases, you will only value the living area which is actually centrally air conditioned. This situation is rare, however it is most often found in older style homes which have been upgraded to a modern forced air central heating system. Again, it is the responsibility of the appraiser to ascertain this condition during the field inspection.

Step No. 9 – Fireplaces & Flues

There is much confusion regarding fireplaces, flues, and especially 'Gas Log' fireplaces. None of these items are included in the basic rate structure and as such must be accounted for in the valuation model as add on items. There are two basic types of fireplaces, the single fireplace on a single chimney, and the 'stacked' fireplace on a double chimney. The 'stacked' fireplace is essentially two fireplace openings, say one on the first floor and one in the basement, which are built on the same chimney. Reference to the standard rate allowance section of the rate table will provide the value for the single fireplace as well as the incremental adjustment attributable to the additional 'stacked' fireplaces.

The following is a list of valuation examples for various fireplace configurations. Assume for this example the single fireplace rate is $3,500 and the stacked increment is $1,500.

1 Single Fireplace	$3,500
2 Single Fireplaces (separate chimney)	$7,000
1Single Fireplace w/ 1 Stacked Fireplace (same chimney)	$5,000

Fireplaces are often much more valuable as an aesthetic feature than as an auxiliary heating source. Because of this, the existence and value of the fireplaces must be included in the valuation process regardless of the usability. There are of course exceptions to every rule which must be considered. If it is found that the fireplace opening has been completely closed off and sealed up, then it is appropriate to note the existence of such fireplaces as 'Inoperable'. This type of condition is often found in old style dwelling built before the existence of 'central' heating systems. Often such homes have many fireplace, usually one in each room, which have been closed off.

The number of chimneys is typically the only visual exterior clue available to the appraiser for the determination of the number of fireplaces. Therefore, it is important to account for all fireplace, operable and inoperable, at the time of inspection. By correctly accounting for the inoperable fireplaces, a reviewer will know that the appraiser has correctly valued and accounted for all fireplaces.

Flues used for free standing wood stoves or other such space heaters are treated in the same manner as fireplaces. The standard rate allowance table will provide the value for each Masonry Flue, the associated stacked increment, and the rate for a Metal Flue. Metal Flues are often found in manufactured housing and are considered to be inferior to masonry flues.

Many dwellings will have a masonry flue for use with an oil or gas fired furnace. Such flues would not be counted separately and should be considered as part of the heating system. Similarly, dwelling that have 'Space' heat would of necessity have to have a flue for use with the oil or wood stove. Such flues should not be valued separately.

In recent years, there has been a trend toward vented 'Gas Log' type fireplaces, as well as Metal wood burning fireplaces with metal chimneys chases encased in a 'Frame' chimney. In the case of the 'Gas Log' type fireplace, this refers to built in units which are gas fired. It does not refer to add on gas log inserts which are installed in a normal masonry fireplace. Care must be taken during the physical inspection as vented fireplace are easily overlooked, especially if there is no exterior framing for the fireplace unit or for a chimney.

Step No. 10 – Built in Garage

This item specifically applies to Garages which are built into a Basement, and are most probably below grade. The value is normally determined by the number of openings, or more correctly, the number of cars the garage is capable of storing. Care must be taken by the appraiser during the physical inspection to correctly determine the existence of the 'Built In' garage. Many contemporary dwellings are being built have a Garage on grade level with the first floor and having either full or partial living area above the Garage. This is the **LAG Living Area above Garage** as discussed in Step 3 above. This type of Garage would be valued as a normal Garage.

As discussed in Step 1 above, Split Foyer and Split Level style structures are typically valued as a 1 story dwelling over a basement. In such cases, if the existence of a garage is noted, it should be valued as a built in garage and the actual garage area would be valued as a basement.

Please note that the value of the finished portion of a built in garage is normally included in the value of the built in garage and not as additional finished basement area.

Some medium aged homes will be found to have an overhead door built into the basement which is not designed for use as a Built in Garage. When such cases are found in the field, it is important to note them in the comments section thus avoiding any confusion.

Step No. 11 – Other Miscellaneous Items

Any additional special features which are noted by the appraiser during the physical inspection should be valued so long as they are truly fixtures to the real estate. Care must be taken to avoid any personal property items in this category. The value for such items should be determined by the appraiser on a marginal contributing value basis. Cost new less depreciation of such items is normally not indicative of value.

Extra Kitchens are another example of a non standard extra item. The value of the extra kitchen is normally found in the standard allowance section of the rate table. Thus in order to add additional kitchens the field inspector merely notes the number of additional kitchens in the CAMRA record. To calculate the value by hand, multiply the number of extra kitchens by the standard rate and add the result to the subtotal.

Step No. 12 – Calculate the Area of all Exterior Attached Sections

This section refers to the notation of all building sections, such as Porches, Patios, Garages, Carports, Decks, etc. which are **attached** to the main structure but are not considered living area. The value for these component sections is found in the Building Attached Section Rates Table, (see below for sample).

Sample Building Attached Section Rates

Code	Rate per SF	Description
ATTC	15.00	ATTIC
BCP	34.00	CARPORT W/BASEMENT
BEGR	45.00	BRICK ENCL GAR/CARPT
BEPR	25.00	BRICK ENCLOSED PORCH
BGAR	30.00	BRICK GARAGE
BMT	25.00	FIN BSMT
BPAT	10.00	BRICK PATIO
BSMT	12.00	BASEMENT
BST	20.00	BASEMENT
BWCP	37.00	WALLED CARPT W/BASMT
CNPY	18.00	CANOPY
CP	22.00	CARPORT
CPAT	10.00	COVERED PATIO
DECK	12.00	DECK
DOCK	10.00	LOADING DOCK
DWMH	35.00	DOUBLE WIDE MOB HOME
EGAR	45.00	ENCLOSED GARAGE
EPOR	25.00	ENCLOSED PORCH
FBMT	20.00	FINISHED BASEMENT
FBST	15.00	FINISHED BSMT
FBT	18.00	FINISHED BASEMENT
FEGR	45.00	FRAME ENCL GARAGE
FGAR	30.00	FRAME GARAGE
FNT	30.00	FIN BSMT
GAR	30.00	GAR BRICK OR FRAME
GARB	42.00	GARAGE WITH BASEMENT
GHSE	15.00	GREENHOUSE
GYM	48.00	GYM
JPOR	28.00	JALOUSIE ENCLOSED PO
PAT	7.00	PATIO
POR	15.00	PORCH
RMAD	45.00	ROOM ADDITION
SHOP	20.00	SHOP
SPOR	18.00	SCREEN PORCH
STOR	20.00	STORAGE
SUNR	45.00	SUNROOM
SWMH	28.00	SINGLE WIDE MOB HOME
UCP	15.00	UNFLOORED CARPORT
UGAR	20.00	UNFLOORED GARAGE
ULAG	15.00	UNFIN. L/A OVR GAR
UTIL	20.00	UTILITY ROOM
WCP	25.00	WALLED CARPORT
WPAT	10.00	WALLED PATIO

Standard Allowance Table

The following is an example of the Standard Allowance Table noted above. In this example, the standard rate structure is presumed to include Central Heat, a Crawl Space Foundation, and 1 Full and 1 Half Bath (a total of 5 fixtures). Also included are various standard rates for components such as Basement Area, Default Finished Basement Area, Built In Garages, Fireplaces, Flues, and Air Conditioning. As each valuation is made, adjustments will be necessary on the basis of these standards to derive consistent and uniform valuations.

Sample Standard Allowance Table

Central Heat Standard	Yes
Crawl Space Foundation	Yes
Full Baths (3 Fixtures Standard)	1
Half Baths (2 Fixtures Standard)	1
Rate per Fixture	$1,000
Pier Foundation Adjustment	- $1.00 per sf
Slab Foundation Adjustment	- $1.00 per sf
No Heat Adjustment	- $1.50 per sf
Wall/Floor Furnace Adjustment	- $1.00 per sf
Basement Rate per Sq. Ft.	$12.00
Finished Basement Default Rate	$20.00
Air Conditioning Rate per Sq. Ft.	$2.50
Maximum Air Conditioning Value	$9,999.99
Fireplace	$3,500
Fireplace Stacked Increment	$1,000
Gas Log Fireplace	$1,500
Flue	$1,500
Flue Stacked Increment	$500
Metal Flue	$500
Built-In Garage	$2,500
Additional Door Increment	$1,000
Extra Kitchen Allowance	$3,500

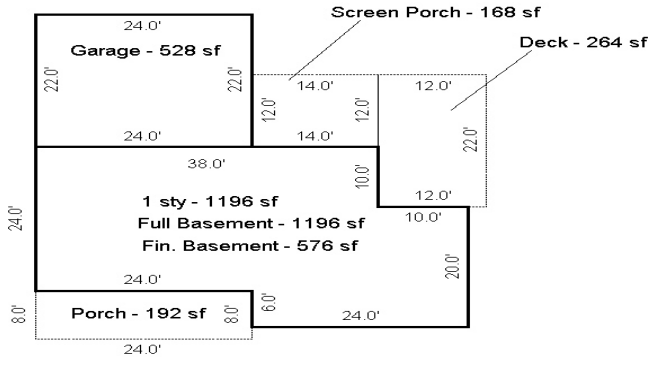
Sample Dwelling Rate Table

The Dwelling Rate Table outlines the standard rates per square for the various exterior wall categories as outlined in Step No. 2 above. The rates also take into account the differing rates attributable to the size related economies of scale. This principle suggests that as the area of the structure increases, the unit price per square foot will decrease.

The sample table listed below references a 1 Story Rate chart, and encompasses structures having 1,150 to 1,240 sq ft.

	Type 1		Type 2		Type 3	
Area	**Rate**	**Value**	**Rate**	**Value**	**Rate**	**Value**
1150	72.52	83,398	74.70	85,902	71.43	82,146
1160	72.44	84,029	74.62	86,555	71.35	82,766
1170	72.36	84,659	74.54	87,207	71.27	83,385
1180	72.28	85,287	74.46	87,857	71.19	84,002
1190	72.20	85,913	74.37	88,506	71.11	84,617
1200	72.12	86,538	74.29	89,153	71.03	85,231
1210	72.03	87,161	74.21	89,798	70.94	85,843
1220	71.95	87,783	74.13	90,441	70.86	86,454
1230	71.87	88,403	74.05	91,083	70.78	87,063
1240	71.79	89,021	73.97	91,724	70.70	87,670

Valuation Example Sample Sketch



1 story
Brick Exterior
2 Full and 1 Half Baths

Central Heat
Air Conditioning

Sketch by Apex IV Windows™

Dwelling Valuation Example

The following example will be based upon a hypothetical structure consisting of a 1 story Brick Dwelling containing 1,196 sq ft with an attached Garage, Porch, Screen Porch, and Deck. The Structure has 2 Full Baths and 1 Half Bath. It is Centrally Heated and has Air Conditioning. It is built on a Full Basement, and there is approximately 576 sq ft of Finished Basement area. The preceding sketch is a representative drawing of this hypothetical structure. The structure is 14 years old and is considered to be in Average Condition.

Structural Element			**Value**
	Sq. Ft.	Rate/Sq. Ft.	
Bldg..	1,196.0 *	74.32	88,887
Basement	1,196.0 *	12.00	14,352
Fin. Bsmt.	576.0 *	20.00	11,520
Plumb.			3,000
Heat			
A/C	1,196.0 *	2.50	2,990
Fireplace			
Blt. In			
Additions			
Porch	192.0 *	15.00	2,880
Screen Porch	168.0 *	18.00	3,024
Deck	264.0 *	12.00	3,168
Garage	528.0 *	30.00	15,840
		Subtotal	$145,661

The Building Rate of $74.32 is derived from the examination of the sample rate table listed above. It will be remembered that the subject has 'Brick' exterior walls which will make it a Type 2 structure as noted in the discussion of Step No. 2. The sample rate table provides rates for 1,190 sq ft and 1,200 sq ft. Normally, if you are just trying to do a quick value computation, it would be perfectly fine to use the closest rate per sq ft. In this case, the rate for 1,200 sq ft, $74.29 would have resulted in a value of $88,851 for the base structure which is only a difference of $36.00. The $74.32 rate chosen is actually interpolated between the 1,190 sq ft rate and the 1,200 sq ft rate. The CAMRA system would produce the interpolated rate on a standard calculated field sheet.

The Basement and Finished Basement Rate were found in both the Building Attached Section Rate table as well as the Standard Allowance Table. As noted in Step No. 5 above, the appropriate rate for the Finished Basement area will have to be determined based upon the best judgment of the appraiser. The $20.00 per sq ft rate used in the example is representative of a standard default rate.

The subject had 2 full baths and 1 half bath. This configuration results in a total of eight fixtures, three more than the five fixtures (1 Full Bath and 1 Half Bath) allowed for in the Standard Allowance Table. The rate per fixture is then multiplied by the number of extra fixtures to derive the appropriate Plumbing value adjustment. If there had only been 1 Full Bath, or only three fixtures, then a negative adjustment of -$2,000 or 2 fixtures @ $1,000 would have been necessary. Again this is because the basic rate of $74.32 per sq ft presumes that the structure has the standard complement of 1 Full and 1 Half bath or 5 total fixtures.

Because the subject has central heating and the basic rate structure is assumed to include an allowance for central heating, no adjustment is necessary. If the subject did not have central heat however, it would have to be adjusted downward appropriately using the standard rate allowances as outlined in the Standard Allowance Table.

The subject is Air Conditioned, and as such the value for this item is derived by multiplying the total living area, 1,196 sq ft, by the Air Conditioning rate as listed on the Standard Allowance Table. The CAMRA system also allows for the valuation of partial Air Conditioning. In such cases, the appraiser must determine the actual Air Conditioned area and value it using the standard rate.

The subject did not have any Fireplace, Flues, or Built In Garages. As such no adjustment allowances have been made for these items.

The Value of the Additions is determined by the application of the appropriate unit rate per sq ft for each section type as derived from the Building Attached Section Rates, as applied to each section.

The subtotal represents the summation of the base cost new for the subject structure before adjustment for quality characteristics and allowance for depreciation.

The next section of this manual will discuss the concept of determining the appropriate Class and Factor from market evidence.

Class and Factor Grading Methodology

In the course of any valuation project, it will become clear that not all structures are created equally. Just because two ranch style buildings have the same total building size does not necessarily mean that the value of both buildings will be the same. There are many individual construction features, material qualities, and other items which must be considered on an individual basis as you arrive at your final value conclusion for any given structure. The purpose of this document is to provide you with some understanding as to the derivation of the Class and Factors used in any given locality.

The majority of assessment valuation models which I have examined over the years all have some form of 'Grading' system which allows the assessor to adjust the final value conclusion of a specific structure based upon the generalized rate table. The typical valuation model is built around a core value table based upon an 'Average' style structure. While the principles involved in the 'Grading' system can and are applied to Commercial and Industrial properties, this discussion will primarily focus on Residential properties.

The process of developing a 'Grading' system begins with the initial sales analysis. As a part of this analysis, the population of sales must be stratified into comparable groupings. Thus all 1 Story dwellings should be considered and evaluated apart from the 2 Story dwellings. Naturally, further stratification based upon size, price, construction style/quality, etc., will be necessary during this process so that the final value determinants are compatible and consistent within groupings of similarity.

Most 'Grading' systems are based upon differences in 'Style' and 'Construction Quality'. Most systems, including CAMRA, employ an 'M','A','B','C','D','E' type classification system. Typically, the individual grades are assigned a numerical grade, sometimes referred to as a 'factor', which acts as a multiplier against the core base rate. The following is a generic example of a grade/factor system:

Grade 'M' Dwelling: Excellent to Superior Quality homes typically associated with 'Estates' and 'Mansions'. Typically, they exhibit the highest quality materials and craftsmanship, and are usually custom designed.

Grade 'A' Dwelling: Very Good Quality homes typically found in better residential areas such as exclusive 'gated' subdivisions. They often exhibit higher quality materials, style and workmanship. While many of the same characteristics of the 'M' class outlined above are found in this category, 'A' Grade dwellings, while unique, are more abundant than the estate quality 'M' type dwelling. The differences may be minor and can only be determined from an analysis of the higher quality sales etc.

Grade 'B' Dwelling: Good Quality homes which are better than the average for the local market. Most exhibit better than average style, materials, and workmanship. Many have attractive architectural design and finish features which are better than the 'typical' average home in a market.

Grade 'C' Dwelling: Average Quality homes, having the most common style, design, and construction characteristics in a given market area. Typically, these homes exhibit the most basic design and finish features, and do not have any of the 'extra' style and quality found in the 'A' and 'B' class structures. These type homes would normally be the most prevalent in any market.

Grade 'D' Dwelling: Fair Quality homes, having minimal style, design, and craftsmanship, normally associated with low cost construction. While this class home is below average for the local market, they do meet minimum standards. This class typically has only the most basic of function, style, and appeal and is often associated with 'starter' type tract homes.

Grade 'E' Dwelling: Low/Poor Quality homes, having only basic to sub-minimal style, design, and craftsmanship. These types are normally rare and are not representative of a typical market area.

Examples of numerical factors associated with the above listed 'Grades' might look like follows:

Class M	-	225%
Class A	-	155%
Class B	-	135%
Class C	-	100%
Class D	-	85%
Class E	-	70%

Thus if the rate analysis determined that the Per Square Foot rate for a typical Class 'C' dwelling is $83.75, the same size structure assigned a Class 'B' would be valued at $113.06 per sq. ft. ($83.75 x 1.35).

During the inspection/valuation process, it will become quite apparent that not all dwelling units fit neatly within the above criteria. Typically, it will be necessary to make adjustments with the grade ranges to recognize these differences. This is usually done with a positive or negative adjustment to the factor percentage. For example, analysis of a certain type of structure may indicate that the dwelling is slightly better than average, but does not quite reach the good quality level. In this case, it is proper to make a +5 or +10 adjustment to the base class 'C' factor resulting in a 105 or 110 factor. Conversely, a dwelling thought to exhibit slightly less than Very Good Quality ('A') might be adjusted down -5 or -10 resulting in a 150 or 145 factor. The final determination of the factor should be based upon analysis of the sales of the most comparable size and style dwellings applicable to the subject.

In order to accurately consider the gradation of factors in any market area, it will be necessary to carefully examine all sales relative to the basic core rate structure in order to accurately ascertain the unique character of each sale. The following is a simple example of a typical sales analysis showing how to derive the final factor as determined by the sale. Because condition and depreciation are not a part of this discussion, certain presumptions relative to those items have been incorporated in this analysis.

Market Derived Factor Analysis

The subject property consists of a 1 Story Vinyl/Brick dwelling situated on a 2.0 acre lot. The site is improved with a paved driveway valued at $2,000 along with an In Ground pool valued at $10,000. The land is considered to have a value of $100,000, inclusive of the value of the 'Utilities', based upon recent sales of vacant home sites similar in size, location, etc. with the subject site. The property recently sold for $350,000. The following is an outline of the analysis process used in the determination of grade/factor.

Based upon the above criteria, and using the core rate structure, a base value for the subject property is calculated as follows:

Structural Element			**Value**
Bldg.	1120.0 @	131.64	147,436
Bsmt.	528.0 @	12.00	6,336
Fin. Bsmt	528.0 @	20.00	10,560
A/C	1120.0 @	2.25	2,520
Deck	355.0 @	12.00	4,260
Garage	484.0 @	30.00	14,520
Patio	192.0 @	8.00	1,536
Subtotal (Base Value)			187,168
Depreciation	3%		-5,615
Total Dwelling			181,553
Other Improvement			12,000
Total Improvement Value			193,553
Land (Including Utilities)			100,000
Total Base Value (Base Class 'C' Rate)			293,600 (rd)

The $293,600 value noted above is the value of the subject that would result if it were valued as an Average Class 'C' structure using its own size, construction characteristics etc., along with the land and other improvement criteria outlined above. Keep in mind that the purpose of this example is to demonstrate the technique involved in derivation of the appropriate class/factor. The valuation of the land, depreciation based upon condition, and value of outbuildings is beyond the scope of this discussion and is assumed to be given.

As indicated, the subject sold for $350,000. Presuming the value of the land including 'Utilities' at $100,000 and the value of the Driveway and Pool at $12,000, the indicated depreciated value of the dwelling is determined to be $ 238,000 or ($350,000-($100,000+$12,000) = $238,000). To derive the value before depreciation, you must divide the depreciated value, $238,000, by 1.00 minus the depreciation percent, in this case 3%. This results in a value of the dwelling before depreciation of $245,361 or (($238,000 / (1.00 - .03)) = $245,361).

Thus, the analysis of the market sale indicates a pre-depreciated value of the dwelling of $245,361 while the core base value indicated $187,168. The differential between these two numbers is representative of the impact of the class/factor on this structure as determined by the market. To arrive at the indicated class/factor adjustment as indicated by this sale, simply divide the pre-depreciated value as indicated by the sale, $245,361 by the core base value, $187,168. This will result in an indicated class/factor for this example of 1.30 (rd), calculated as follows ($245,361 / $187,168 = 1.3109 rounded to 1.30).

The following is a synopsis of the process outlined above:

Sales Price		350,000
Less Land Value		-100,000
Less Other Improvements		- 12,000
Depreciated Building Value		238,000
Replacement Value New	(238,000/.97)	245,361
Subtotal Base Value (see above)		187,168
Calculated Factor	(245,361 / 187,168)	1.30 (rd)

Thus, by applying the derived factor of 1.30 to the subject property, using the core base rate structure, the given land, other improvement value, and depreciation, will result in an indication of value of $348,000. This process is outlined as follows:

Subtotal (Base Value)	187,168
Value Adjusted for Class/Factor $187,168 x 1.30	243,318
Less Depreciation -3% of $243,318 or	- 7,300
Depreciated Building Value	236,018
Other Improvement Value	+ 12,000
Total Improvement Value	248,018
Land Value (Including Utilities)	+ 100,000
Total Property Value	$ 348,000 (rd)

It is important that the above outlined process be completed for every sale. By this analysis, differences related to location, etc. can be derived from the market. It should also be obvious that based upon this type of analysis, the appropriate class/factor for similar dwellings which did not sell can be ascertained. This is fundamental to the application of equitable assessments within any given jurisdiction.

Impact of Location on Class/Factor Analysis:

The primary focus of this discussion to this point, has been the style and construction features of individual dwellings as the primary determinant of the class/factor quality adjustments. Sometimes however, the location of the subject may have a positive or negative impact on the class/factor determination apart from the style/quality consideration.

An example of this condition could be adjustments made to class/factor for proximity to a negative external influence such as a junkyard or railroad. Keeping in mind that the market should be the primary determinant of this type of adjustment, it is often better to adjust the class/factor to reflect this type of value difference even though it could technically be described as a location adjustment. Technically, such adjustments could also be made as 'Economic Depreciation Adjustments'. The only consideration would be that such adjustments are made uniformly and equitably.

Another common example of the need to modify the class/factor for location can be found in many modern tract type residential subdivisions. There are many such subdivisions which are comprised of dwellings having the superior style and quality of the Class 'B' type structures which are so similar in design and are sited so closely together, that they lose much of their superior quality characteristics and as such must be adjusted downward with regard to class/factor. Normally, such structures having sufficient architectural uniqueness and sited on adequate lots to enhance and or showcase their superior style and quality would probably need to be graded at an above average class/factor appropriate to their size, style, etc. Some developers however have in recent years created subdivisions of larger, quality dwellings which are relatively the same in style and quality and are sited on small lots intended to maximize the number of dwelling units per acre. Because of this, much of the attractiveness of these type structures may or may not be lost. It is evident from past analysis of such sales, that the superior characteristics of such dwellings are often offset by the homogeneity of the subdivision. In such cases, the only unique difference available to a property owner when marketing the property is price. The only way to adequately determine the appropriate class/factor for such dwelling units is to monitor the sales analysis as outlined above. Simply using a visual adjustment based upon style, size, or construction quality may result in value determinations in excess of the current market conditions.

Conclusion:

As indicated, the initial determination of the Class and Factor system appropriate to a particular jurisdiction comes from the analysis of the market sales with an eye toward stratifying the sales into groups of comparable style and quality. From this analysis, it will become clear what type and style dwelling is 'Average' for a particular jurisdiction and what types are superior and inferior to that average. It is **not appropriate** to rely upon some visual/style standard without regard to the local market conditions. What is an average or typical dwelling in Beverly Hills, California may be much different than the average and typical dwelling in Richmond, Virginia. Development of the core base rate structure will rely upon the appropriate gradation of the market sales, and the final determination of the appropriate class and factors will be made from the analysis of the individual sales in relation to the core base rate structure. Through the combination of this market analysis, and a consistent application of the derived results to all similar properties, we can be assured that our final assessed values are as accurate and equitable as possible.

Application of Class and Factor Adjustment

The Dwelling Valuation Example outlined above resulted in a base Subtotal Value of $145,661 for the example dwelling. As noted, this subtotal value represents the 'Average' or 'Class C' value for this structure based on the example rate structure. As discussed above, the correct determination of the appropriate Class and Factor for the example dwelling would have to come from an analysis of local market sales of similar structures. The appraiser must remain cognizant of dwelling types and indicated Class and Factor determinations as he/she finds and analyzes individual sales in the local market areas. In this way, some degree of comparability can be achieved on the local level during the initial property inspection phase of a reassessment.

In the above example, if it is determined that the subject structure is in fact 'Average' of typical for its local market in relation to the local sales population, then no further adjustments are required in the final determination of the Value Before Depreciation. If however, analysis of the local sales indicates that the example subject is a 'Class B' type structure, then the Value Before Depreciation will be determined by multiplying the Subtotal Value of $145,661 by the Class B Factor, as follows:

Subtotal		$ 145,661
Factor	1.35	$ 196,642
(Class B Factor = 1.35)		($ 145,661 x 1.35 = $ 196.642)

As discussed previously, the factor can be modified and adjusted up or down based upon analysis of local market data. For example, if it is determined that the subject in the example is not quite as good as the typical Class B structure, it may be necessary to modify the factor downward. For purposes of clarity, a -.05 adjustment is assumed. In the above example this would reduce the Factor to 1.30 (1.35 -.05 = 1.30) reducing the Value Before Depreciation from $ 196,642 to $ 189,359 ($145,661 x 1.30 = $ 189,359).

Application of Depreciation

The final step in the process is the application of the appropriate level of depreciation. The CAMRA system allows for application of the three standard forms of depreciation; Physical, Functional, and Economic. It is assumed that the reader is familiar with this topic and its application in the appraisal process. Any number of texts on this topic are available for those who are unfamiliar with the concept and application of depreciation.

It is important to note that a prime consideration in the application of depreciation is the concept of Actual Age versus Effective Age. It will also be assumed that the reader is familiar with this concept. As above, if you are unfamiliar there are many texts on the subject for your use.

The CAMRA system has the ability to apply Physical Depreciation by default based on Effective Age and Condition. The base rate tables in the system have provision for establishing depreciation rates and limits for Good, Average, Fair, and Poor condition categories. For example:

Good Condition	**.35% Dep. Per year**
Average Condition	**.50% Dep. Per year**
Fair Condition	**.65% Dep. Per year**
Poor Condition	**1.0% Dep. Per year**

The example dwelling that has been discussed above was noted as being 14 years old and is considered to be in Average Condition. This would result in a default Physical Depreciation of 7% (14 yrs @ .5% per year = 7.0%). The same structure in Good Condition, would indicate Physical Depreciation of 5% (14 yrs @ .35% per year = 5.0% rd). It is presumed in this example that the Actual Age of 14 year equals the Effective Age. If however, the appraiser determines that because of upkeep or renovation, etc, that the structure is effectively only 10 years old and in Good Condition then the indicated Physical Depreciation would only be 3.5%, (10 yrs @ .35% = 3.5%).

Because of the inherent difficulty in determining the correct Effect Age, as well as the 'Subjective' nature of the decision on Condition, use of the default depreciation tables typically loses some reliability with older structures. It has been found that the default tables are most applicable when valuing structures which have an effective age of less than 20 years. For structures over 20 years, market extraction of depreciation has been found to be much more reliable.

The process of properly applying depreciation requires the deduction of all Physical Depreciation from the 'Value Before Depreciation' before adjusting for Functional Depreciation. Further, all Economic Depreciation would have to be deducted after allowance for all other forms of depreciation. This is obviously because Economic Depreciation is by definition caused by factors outside the property and beyond the influence of the property owner.

The following example has been constructed to clarify the application of depreciation calculation using the sample dwelling previously described. Again we will assume the structure is a Class B structure, that it is 14 years old and is considered to be in Average Condition. For the purpose of this demonstration, Functional Depreciation of 5% will be added, along with an Economic Depreciation allowance of 10%.

Subtotal		$ 145,661	
Factor	1.35	196,642	Value Before Depreciation
Physical Depreciation	7.0%	- 13,765	($196,642 x .07 = $13,765)
(Value less Physical = $ 182,877)			
Functional Depreciation	5.0%	- 9,144	($182,877 x .05 = $9,144)
(Value less Functional = $ 173,733)			
Economic Depreciation	10.0%	- 17,373	($173,733 x .10 = $17,373)
Total Depreciated Value		$ 156,360	

As indicated, the Physical Depreciation is deducted from the Value Before Depreciation prior to the application of Functional Depreciation Adjustment. Economic Depreciation is applied against the Value after the deductions for Physical and Functional Depreciation. A common error would occur if the Total Depreciation was based on the summated total of the three types of depreciation. In this method, each depreciation associated with the different categories is applied against the total Value Before Depreciation. Mathematically, this is the same as adding the three depreciation percentages together to get one overall depreciation.

In the above example, the sum total of the Physical, Functional, and Economic Depreciation is 22.0% (7.0% + 5.0% + 10.0% = 22.0%). This would result in a Total Depreciated Value of $ 153,381 ($ 196,642 x 78.0% = $ 153,381). While this result is reasonable given the Total Depreciated Value of $ 156,360 indicated in the above example, use of the 'Summary Depreciation' methodology can result in illogical results.

An example of such an illogical result would occur if, for example, the subject was an older structure with large amounts of Physical, Functional, and Economic Depreciation. Please refer to the following example:

		Standard Depreciation	Summary
Depreciation			
Value Before Depreciation		$ 200,000	$ 200,000
Physical Depr. ($ 200,000 x .60)	60%	120,000	120,000 ($ 200,000 x .60)
Functional Depr. ($ 80,000 x .35)	35%	28,000	70,000 ($ 200,000 x .35)
Economic Depr. ($ 52,000 x .10)	10%	5,200	20,000 ($ 200,000 x .10)
Total Depreciated Value		$ 46,800	<$ 10,000 >

Note that the Standard Depreciation Methodology resulted in a Total Depreciated Value of $46,800 while the Summary Depreciation example resulted in a **negative** $10,000 value. While this is an extreme example, it illustrates the potential error of trying to use summary depreciation.

Depreciation by Market Extraction

Depreciation can also be measured by analysis of current sales data. The procedure for determining the correct level of depreciation from a sale would be similar to the procedure outlined for extracting the Class and Factor from the Market as described above. In this case, the Class and Factor would be assumed as given and the sale would be analyzed backwards working towards the unknown depreciation.

Having 'worked' several sales of comparable style, effective age, and condition, the appraiser should begin to develop a standard basis for depreciation applicable to the broader population of structures. Indeed, the standard depreciation allowances for Physical Depreciation outlined above would initially be derived from such a market analysis. Allowances for Functional and Economic Depreciation are typically much more subjective and will have to be accounted for separately in any sales analysis. Again, having determined the need to make Functional or Economic adjustments, the appraiser must be vigilant to equitably apply the same criteria to similar properties so that the final values are uniformly derived.

Conclusion

It is very easy to think of Physical Depreciation as being an 'Objective' decision based wholly on the age of the structure. This is especially true with a 'straight line' depreciation method, which leads to the adoption of the 'default' type depreciation table described above. Depreciation however typically does not follow a true 'straight line' path, and continually has to be adjusted. If it is presumed that structures depreciate 1% per year regardless of upkeep, etc., then every structure which reaches 100 years age will have to be considered fully depreciated. Logic, and indeed market evidence, prove the fallacy of this presumption. It is for this reason that analysis of market data normally produces a more reliable indication of depreciation.

It is important to keep in mind, that regardless of the procedure used to determine the appropriate level of depreciation, there will inevitably be 'Subjective' decisions that must be considered. In the case of the use of the 'Default' depreciation table, the appraiser must 'Subjectively' consider the appropriate Condition as well as the correct Effective Age for the structure. Again the only true basis for making such subjective judgments would be by analysis of similar market sales. Having made the determination of appropriate Condition and Effective Age for a particular style structure, the appraiser would then have the responsibility of making sure that the same 'Subjective' criteria was applied to other similar and comparable structures.

This is no different than extracting the depreciation from market sales. In both cases, 'Subjective' decisions will have to be made before a final determination of depreciation can be adopted. Once the appropriate Condition, Effective Age, or market derived Depreciation has been determined, then those same criteria must be applied to all structures having the same characteristics.

Special Note:

At the present time, the CAMRA system does not have a provision to apply different levels of Physical Depreciation, or different Class and Factors to individual residential structure components. For residential structures, the Physical Depreciation, Class and Factor, apply to the entire structure. Therefore, during the physical inspection, particular care must be given to the overall level of condition etc. especially on older dwellings which have had recent upgrades and new additions added to the older original structure. Future versions of CAMRA will correct this deficiency.

This situation does not exist for Commercial structure. The CAMRA system has the capability to value each Commercial building component separately and as such different building sections can be Classed, Factored, and Depreciated individually. Functional and Economic depreciations apply to the entire structure the same as with residential structures.

Other Improvement Valuation

The value for improvements which are not 'attached' to the main structure is categorized in the 'Other Improvements' section. This area covers items such as paved driveways, detached garages, pools, etc. which are found on the property but are separate from the primary structure. Typically, the value of these items is based upon the concept of 'Marginal Contributing Value', which is much different than a 'Cost less Depreciation' method.

Marginal Contributing Value is based upon the premise that the value of the unit in question only marginally adds to the overall value of the property. Normally, the items are found to be in use however the property would very well sell for the same if not more if the item was not present. Old style 'Bank' barns are a classic example of structures whose size, style, and construction characteristics would require a tremendous replacement cost to reproduce, yet because of modern building styles and farming techniques such structures have little if any real value to today's farm operation. Typically, such structures have some limited use so the Marginal Contributing Value represents the value of that limited use and does not have any relationship to the actual cost of replacement.

An additional complication posed by the marginally useful improvement is that the value of such improvements is quite difficult to extract from sales data. Indeed comparison of similar market sales whose main difference is that one includes such a marginally useful improvement, may not indicate any difference in price attributable to the improvement. This logically suggests that such improvements have virtually no value.

A more substantial detached improvement such as a modern detached garage, can be more appropriately and accurately valued by application of a Cost less Depreciation methodology.

In order to provide some guidance, a table of some common type outbuilding improvements along with associated rate and value ranges will be found in the rate table. Keeping in mind that the condition, style, and quality of such structures varies greatly, the values are typically listed in ranges. The appraiser must try to maintain as much consistency in the valuation of these items as possible.

Commercial Valuation Guide

The Commercial Valuation model used in the CAMRA system is based on the Marshall & Swift Valuation Service model. Generally speaking, the best way to think about the use of this system is to first define the type of structure, such as Apartment, Office, Commercial, Industrial, etc. It is presumed that the reader has some familiarity with the methods and procedures used with the use of cost guide such as Marshall & Swift.

Commercial and Industrial type properties often have special built structures which having been constructed to the specialized specifications of the original user/owner, often have only minimal market value once the original user/owner terminated the initial use. Typically, such properties undergo significant renovations and upgrades between owners such that the upgraded property often takes on the special characteristics of the new owners.

Commercial retail type structures often are subject to the demands and needs of the retail industry. The typical age life of many of these structures is heavily dependent upon the current market demands as related to the retail industry. An example of this is found in many small towns. First the commercial/retail district was located in the down town area, then it moved to small out lying strip type retail properties, then larger 'Mall' type properties were developed, before coming to the modern day 'Box Store' malls. Often this entire cycle can evolve within a comparative short time frame. While many small towns have seen a renaissance in the form of small specialty 'Boutique' type renovations to the old down town commercial districts, the same can not be said for many older style strip shopping centers. In many areas, such facilities are found to have very high occupancy rates, even when the structures are relatively young.

It is for this reason that commercial properties must be more aggressively depreciated in many cases, especially if the more modern type development is taking place.

The commercial model used in the CAMRA system is somewhat different than the residential model. The primary difference lies in the ability to Class, Factor, and Depreciate individual building segments independently. Thus if a 40 year old industrial facility builds a new 20,000 sq. ft. distribution warehouse, attached to the original facility, the new warehouse can be depreciated 1% and the original structure can be depreciated 45%, etc.

Another major difference between the commercial and residential models lies in the valuation of Basement Areas. The residential model will automatically compute and calculate the value associated with the basement. Likewise, finished basement area is valued by noting its existence and assigning it a value. In order to value basements and finished basements of 'Commercial' type structure, including Churches, both the Basement area as well the Finished Basement area must be sketched and valued like building additions. When computing the value by hand this does not make any

difference, it is upon entering the structure information in the computer system that failure to note the basement as a building section will cause its value to be omitted.

Often, the entire lower area of a structure is finished, however not to the same degree as the upper level, for example a church social hall beneath a sanctuary. In this case you can easily choose a lesser building code whose value is appropriate to the value desired.

Because many Commercial and Industrial facilities are unique or specialized, a rate appropriate for that particular type structure may not be readily available. In cases such as this, it is normal to look up the structure type in the Marshall & Swift manual along with the rates for the different classes of building type associated with that structure. Having rated the building type and localized the rate merely insert the rate type into the Commercial Rate Table.

The following is an example of the Commercial Rate Table used in the CAMRA system:

Commercial Rate Table (sample)

Code	Rate Class A	Rate Class B	Rate Class C	Rate Class D	Description
A01	90.00	75.00	60.00	45.00	APARTMENTS-BRICK
A02	80.00	60.00	45.00	35.00	APARTMENTS-CINDERBLK
A03	80.00	65.00	50.00	35.00	APARTMENTS-FRAME
B01	110.00	90.00	75.00	60.00	OFFC BLDG-BRICK
B02	80.00	70.00	55.00	45.00	OFFC BLDG-CINDERBLCK
B03	100.00	80.00	65.00	50.00	OFFC BLDG-FRAME
B04	60.00	50.00	45.00	40.00	OFFC BLDG-METAL
C01	65.00	55.00	45.00	40.00	BRICK RETAIL STORE
C02	60.00	50.00	40.00	30.00	FRAME/CB RETAIL STOR
C03	55.00	45.00	35.00	30.00	METAL RETAIL STORE
C04	40.00	35.00	30.00	25.00	MASONRY WAREHSE/SHOP
C05	35.00	32.00	28.00	25.00	METAL WAREHOUSE/SHOP

The idea behind the Class rating is similar to the differences outlined in the Class and Factor section. Basically, Class A has the highest quality and value, while Class D is the least valuable. The major difference between the commercial and residential models with respect to the Class and Factor, is that unlike the residential model, the rate itself changes with the changing of the class. In the residential model, there is one rate that is adjusted on a percentage basis by the application of the Class and Factor. This distinction is what allows the system to value the building section independently. Whereas the adjustment for Class and Factor as well as depreciation are made after the determination of the subtotal in the residential model, these adjustments are made prior to the subtotal in the commercial model. Adjustments for Functional and Economic depreciations are made after the determination of the subtotal.

Land Value Analysis

Perhaps the single most difficult problem facing the appraiser is the determination of land value. This is made doubly difficult in a reassessment because of the need to maintain an equitable application of land value. While this document is not meant to be a text on the principles of real estate appraisal, it will attempt to provide some of the insight into the process of land valuation.

During the field inspection phase of a general reassessment project, the initial determination of land value will have to be derived from an analysis of the market sales data. Attached to this rate book is a comprehensive listing of the most recent sales which have been examined.

Section 1 of the sales listing provides a list of the most recent sales, improved and unimproved, which have been examined. This listing is only a partial list of the complete sales files. It is intended to provide the most recent sales, as these sales are normally considered to be the most representative of current market conditions. This list of sales has not been adjusted for time considerations, and as such the Sales Price Listed is the actual reported transaction price. Also note that the number of parcels included in the transaction is indicated in the Parcel Count column. This Parcel Count is determined using the association of Deed Book / Page Numbers or Instrument Numbers for the various parcels. The Total Assessment is the actual assessment for the individual parcels in the sale, while the Sales Price is the total Sales Price for all parcels in the transaction. Keeping in mind that the associated parcels may or may not lie on sequentially numbered map parcels, to find the additional parcels involved in a multi parcel sale, you must check the sales price, the sales date, and the grantor and grantee names.

Section 2 of the sales listing is a compilation of the most recent Small Acreage parcels. This list includes all sales of up to 20 acres as these are classified as Class 1 & 2 by the Department of Taxation Land Use Class Code system. Class 1 properties are Urban Residential and Class 2 properties are Suburban Residential both of from 0 to 20 acres in size. This list has been limited to only single parcels sales. Note also, that the Sales Prices have been adjusted to Time, and a time adjusted Unit Rate has been calculated using a Land Residual (sometimes referred to as Allocation) analysis.

Section 3 of the sales listing is similar to section 2, however it lists the Large Acreage (20 + Acres) parcels. This list include only single parcel transactions, and is expanded in scope to include a wider time range. This is primarily because the number of larger acreage single parcel sales is typically limited in any given year. Note also that the list is in Map Number order and Acreage Size order. As with the Small Acreage list, these larger sales have also been analyzed for a Unit Rate per acre.

It is often said about land that “They aren’t making any more of it”. Because of the basic truth behind this old saw, land sales are typically more susceptible to the economic principle of supply and demand than they are to the principle of substitution. Every parcel of land is unique, and because of the lack of homogeneity the market tends

to produce wide fluctuations in price often amongst similarly sized parcels located in relatively close proximity. It is not unusual when trying to determine a pattern amongst sales in a particular subdivision for example, to conclude that the developer is getting whatever the market will bear rather than some logically derived price per parcel.

Because the valuation of land is so dependent upon the influence of location, it is very difficult to establish broad value guidelines and expect them to be applicable throughout a locality. Normally, as with any appraisal assignment, the appraiser must rely, to as great an extent as possible, on local market sales for the determination of value.

The first step in the valuation of land is obviously the determination of the Highest and Best Use of the site as if vacant and available for development. Highest and Best Use is defined as follows:

> "The reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, and financially feasible and that results in the highest value."

Once you have determined the appropriate Highest and Best Use for your subject, then review the recent comparable sales from the sales files outlined above to find recent sales of similar properties. If you determine that there are insufficient sales in the immediate area, you may have to expand the range of your sales search in both distance and time. In areas with limited vacant sales activity, such as older residential areas, it is appropriate to analyze the improved sales using a Land Residual (sometimes called an Allocation method) technique.

Home Site Valuation Considerations

The size of the property plays a significant role in the process of determining land value. For properties which are improved with an existing dwelling, it is appropriate to segregate and value a home site independently from the remaining land area. This has the benefit of assuring the value of the home site and dwelling is consistent and equitable with other residential properties. The value of the 'residue' acreage can then be valued separately, allowing site residues of comparable size to be valued on the same basis.

Sites having a residential Highest and Best use which are vacant would have to be valued in the same manner as the improved residential lots for purposes of maintaining a consistent and equitable valuation methodology. An example of this situation would clearly exist in a residential subdivision. Certainly it is evident that all lots in such a subdivision would of necessity have to be valued in one consistent manner regardless as to whether any particular lot is developed or undeveloped. The value of each individual lot should obviously be based upon the sales of the undeveloped lots in the subdivision and the values should be applied uniformly throughout.

Similarly, non-subdivision parcels in areas having a residential Highest and Best Use or character must also be valued in a related manner. Consider the following example:

Two adjacent three acre parcels are located in an area consisting of a mix of residential and agricultural properties. Both tracts have identical location, terrain, and view as well. Further there is also located adjacent to the two three acres sites a one ace site also having the same physical and location characteristics as the three acre sites. The three acre sites lots are determined to have a value of $30,000 based upon analysis of similar sales in the immediate area, while the sales data indicates that the one acre site has a value of $20,000. For purposes of analysis, the three sites all have the first acre treated the same, valued at $20,000 each. The sales data outlined above can then be analyzed to determine that the marginal value of the additional residue acres of the two three acre sites is $5,000 per acre. The final values for the three example lots is outlined as follows"

	Parcel 'A'	**Parcel 'B'**	**Parcel 'C'**
	1.0 Acre @ $20,000	1.0 Acre @ $20,000	1.0 Acre @ $20,000
		2.0 Acre @ $5,000	2.0 Acre @ $5,000
Total Value	$20,000	$30,000	$30,000
Unit Price/Ac	$20,000	$10,000	$10,000

The forgoing analysis clearly demonstrates that each of the lots was valued in a consistent and uniform method based on data derived from comparable sales.

Taking this example slightly forward, suppose that Parcel 'A' is improved with a dwelling and that Parcel 'C' also has an identical structure. Obviously the value of the improvements for the two sites would have to be the same, the only difference in the two lots being the size of the land. Should the owner of Parcel 'A' complain that the value of his/her site is too high based upon the comparison of the $20,000 per acre unit price of Parcel 'A' compared to the $10,000 per acre unit price of Parcel 'C' the complaint would easily be negated by pointing out that both lots had the initial 1.0 acre home site valued at $20,000 while only the excess acreage of Parcel 'C' was valued at the lower unit rate consistent with actual market sales data.

Another reason for using the 'Home Site and Residue' method of land valuation for improved as well as unimproved lots is to maintain uniformity and consistency in the event that the unimproved lot was improved in the future. In the above example, Parcel 'B' was unimproved. It is agreed that the value for the site is $30,000 consistent with Parcel 'C'. Had the valuation method simply assigned 3.0 Acres @ $10,000 for the land value, the value would obviously be correct, however the methodology of the assessment would have been inconsistent with that of Parcel 'C'. Further, if Parcel 'B' were to be developed in the future, the land assessment would have to be adjusted to reflect the 1.0 Acre Home Site and 2.0 Acre Residue breakdown consistent with the valuation of Parcel

'C'. This is obviously an added layer of work requiring assessors to adjust site valuation methods without having any impact on the bottom line value.

Using the 'Home Site and Residue' method also assures that the land valuations are consistent and uniform sites having residential Highest and Best Use but are dissimilar in size. Consider the following example:

Tract 'A' containing 8.52 acres sold for $57,600 or approximately $ 6,761/acre.
Tract 'B' containing 3.79 acres sold for $34,000 or approximately $ 8,891/acre.
Market Sales indicate 1.0 acre Home Sites have a value of $20,000.

By using the 'Home Site and Residue' method of analysis, the sales of the two tracts as well as their assessments can be established as follows:

Tract 'A' 8.52 Acres		
Sales Price	$ 57,600 or	$ 6,761 per acre (rd)
		($57,600 / 8.52 ac)
Value of 1.0 Home Site	20,000	
Value of 7.52 acres Residue	$ 37,600 or	$ 5,000 per acre
		($37,600 / 7.52 ac)
Tract 'B' 3.79 Acres		
Sales Price	$ 34,000 or	$8,971 per acre (rd)
		($34,000 / 3.79 ac)
Value of 1.0 Home Site	20,000	
Value of 2.79 acres Residue	$ 14,000 or	$ 5,000 per acre (rd)
		($14,000 / 2.79 ac)

Assuming that the assessment methodology of the two tracts reflects that $20,000 Home Site and $5,000 per acre Residue values outlined above, the two assessments would not only be consistent with the actual sales but would be uniform in methodology. Should the owner of Tact 'B' complain that his/her assessment is excessive relative to Tract 'A' on a unit price comparison basis, there argument is easily and completely negated by examination of the sales as well as the methodology.

The above examples are obviously simplistic and do not reflect the complexity of actual market variations. Care must be taken when analyzing the population of sales to account for differences related to location, terrain, size, etc. Naturally, the values of Home Sites and Residue acreage derived will more than likely reflect 'Ranges' in values rather than the absolutes used in the above examples. None the less, the Assessor must use careful judgment in the derivation of the various unit values, and must take measures to maintain consistency in the application of those values. In so doing, the uniformity and accuracy of the assessment overall can be maximized.

Home Site Determination Considerations

Parcels of up to 20 acres are classified by the Department of Taxation to be 'residential'. Typically, such properties are purchased for residential use however limitations of terrain, access, shape, etc. may preclude the potential for residential use. The following is a suggested list of guidelines to be considered when valuing small acreage parcels. While the probability of residential use is greatest with these properties, several criteria must be considered.

1. A Home site is defined as a separate saleable lot, large enough to support the placement of a dwelling or mobile home.

2. The Home site must have access to Roads. Off Road acreage is not to be considered as suitable if it does not have at least a private R/W access. Remember, access is the key factor.

3. Small assemblage acreage with no access should not be valued with a Home site. Such parcels **must** be noted as 'Assemblage' and the R/W and Easements must both be **'None'**.

4. Terrain is also a critical factor to consider. You must give consideration to the ease of access and how the land lays. This is why you must attempt to be accurate with these descriptions . Do not just assume that **'On and Rolling'** is good enough. **Think about what you are looking at!**

5. Size and Shape are also key factors. Ask yourself the question, could I reasonably build a dwelling on this site? If you honestly feel the answer is no, then do not break out a home site, but state that the site is considered as **'Un-build able'.**

6. Do not forget to check about flood plain issues. Ask about creeks etc. when you see them. If needs be, check with the local officials about HUD recognized flood hazard zones.

7. If a property has a second dwelling or a mobile home you should normally break out an additional Home site. Especially if the size if greater than 2 acres and you honestly feel the second dwelling could be sold separately

8. If second dwellings are located too close to the primary structure, then **do not** break out a second home site. In such cases, you need to make a note of the limitation in remarks. Do not assume you can ignore the second home site by taking this option.

9. All parcels with at least 20 acres (State Class 1 and 2) need to have a home site. The State Land Use Class codes specifically define such parcels as 'Residential'.

10. Everything up to this point is fundamental to the question of **'Highest & Best Use'**. Highest and Best Use is defined as a concept that requires property be appraised as though it were being put to its most profitable use, given probable legal, physical, and

financial constraints. The question you have to ask yourself is: 'Could this parcel be legally and feasibly developed as a home site ?' Or, 'could this parcel be sold off independently if needs be to get some quick cash ?'

11. The question often comes up when a large acreage landowner has several small adjoining parcels. In the past, we have often removed the home sites and used the same per acre rate as used with the adjoining land. I realize that this has been done many times in an effort to eliminate arguments at hearing time. But are we ignoring the value in order to avoid an argument? In many areas, especially localities with Land Use, the large acreage owners are restricted by ordinance as to the number of out parcels they can sell per year. These restrictions are normally on a per parcel basis rather than total acreage. Thus, the landowner who has several small acreage 'assemblage' parcels adjoining his main large tract in effect has 'Cash in the Bank'. Another landowner with the same total acreage, but all in one parcel, would be restricted from selling off the same number of parcels, assuming he/she were in a cash crunch and needed to turn some land into cash. Remember, regardless of a landowners desire to hold or sell his property, the value is determined by the 'Highest and Best Use'.

12. Many localities are putting restrictions on minimum acreage required for subdividing large acreage parcels in an effort to 'Save the Agriculture' land. When this happens, it puts an additional premium on existing independent small acreage parcels such as 'Grandma's garden lot next door to the house'. Such parcels are typically 'grandfathered' and are not subject to the same development restrictions. You **must** investigate the existence of such restriction prior to beginning the field work. This especially applies to project supervisors.

13. Keep in mind the position of existing structures and septic systems in subdivisions. Many times a landowner may own two lots in a subdivision, but for whatever reason decided to build the house across the lot line rendering one lot un-build able. The same situation applies when an additional lot is needed for the 'Septic System' or 'Driveway' or whatever. If the second lot can not be developed independently, you must adjust its value accordingly. Please note however, the method of doing this should be **Full Value less Adjustment**. For example, if the typical lot is selling for $25000 and Landowner Jones has built his house on two adjoining lots then the main lot needs the full value of $25000 but the second lot should be adjusted down. The value should show something like $25000 – 25% or whatever. (**example only)!**

14. Home sites which are said to **'Not Perk'** should also be valued at full value less adjustment as outlined above. I have seen too many lots that supposedly did not perk and four years later have a new house. If we value the site as build able at full value less an adjustment, then all that the locality needs to do to correctly value the property when built on is to remove the adjustment.

Water & Sewer Utility Value Consideration

In the course of beginning a valuation project, it will be necessary to investigate local costs for Public Water & Sewer Fees along with typical costs for standard Wells and Septic Systems. Once established, these unit rates will be added to the final Land Value where applicable.

Keep in mind that our reason for adding the value of 'Utilities' to the Land Value is that they represent improvements to the property which are actually located beneath the surface and are not removable. In the event the Dwelling should be destroyed or the manufactured home removed, the 'Utilities' will remain. The value of a lot having a usable well and septic system or existing public utilizes will obviously be much greater than a comparable site which lacks those improvements.

There are some valuation models which apply the value of the 'Utilities' to the value of the Improvements rather than the Land as described above. The classic problem with this approach occurs once the 'Dwelling' has been removed. The Commissioner of the Revenue or Real Estate Office of the jurisdiction will have to remember to add the 'Utility' value to the site improvement section while deleting the 'Dwelling' from the parcel. The Land Owner will not understand why the locality still shows the site as having an improvement since he/she knows the site is now vacant. Having included the value of the 'Utilities' in the Land as outlined above will result in **no change** to the Land Value while the Improvement Value will be **ZERO**. This concept is much easier to explain to a land owner and has the added benefit of being much simpler to administer.

Agricultural Acreage

The number of sales of large acreage agricultural parcels is often limited. This is particularly true in the more rapidly developing jurisdictions. Located at the rear of the sales listings is a list of the large acreage land parcels which have sold in the locality. The larger acreage parcels are normally comprised of open land, both pasture and tillable, and wooded acreage. In many jurisdictions having significant water frontage or wetlands there may also be marsh land or swamp acreage which must be considered. In areas where there is an active timber industry, the value of the Timber must also be taken into consideration.

Because most large acreage tracts have a combination of different land types, some effort must be made to stratify the value of the component parts in order to extract the unit values for the individual components from the analysis of each sale. At the same time, it must be remembered that in every large tract there will be a certain amount of 'Good' land and at the same time there will be some 'Bad ' acreage. It is for this reason, that analysis of an overall price per acre is sometimes the best and most representative measure of a properties worth.

Size is another consideration affecting large acreage tracts. Conventional wisdom suggests that as properties go up in size, the unit price per acre of the sales will decline. Over the past few years however, market evidence has failed to support this assertion. Careful analysis must therefore be given to the determination of appropriate unit prices and how they are affected by size.

Having analyzed the sales to derive the unit price ranges for the various land components, the final application of the unit rates will be predicated on the location of the subject, the quality of the terrain, etc. Because the typical large acreage parcel is comprised of several land component types, it is useful to calculate a final overall price per acre as a measure of uniformity. In this way, you will be able to tell if your unit values are too high or too low with respect to the sales in the local area.

It must be kept in mind, that the Use Value of agriculture land is often quite different than the Market Value. In the past, extraordinarily high sales have simply been dismissed as speculative values attributable to developers. In recent years however there is a growing market for large acreage 'Estate' type properties which, despite having more than twenty acres, are being marketed for use as essentially a single family residential parcel. These 'Gentleman Farms' have no significant agriculture use in terms of a modern agri-industry operation. They are often used as a 'Hobby' farm with horses or specialty livestock being the only agricultural use. The sales associated with these properties are often significantly higher than would be expected from typical agricultural properties.

The analysis of individual sales, and the observed trend in the character of the market must be considered.

Commercial Land Value Guidelines

The valuation of Commercial land is based upon numerous factors. As you know, commercial development is highly cyclical and varies based upon the often changing market demand. Local zoning, land use comprehensive plans, public utilities, traffic corridors, etc., all play important roles in the considerations given to commercial properties by the development community.

In many communities, major changes in commercial value can be affected due to new commercial development which tends to attract the shopping public away from the older, dated style, shopping areas. This trend is exemplified by the recent proliferation of 'Box Store' type facilities such as witnessed by Wal-Mart Super Stores, Lowe's, or Home Depot. These type of developments tend to attract new commercial growth wherever they are developed, typically detracting from the demand for older style facilities regardless of age.

In addition to the demand and values elicited by the major development, there is normally a significant increase in demand for ancillary 'out lots' in conjunction with the major development. This trend is evidenced by the congregation of similar usages such as banks and fast food restaurants along with minor out parcel strip developments in close proximity to the major development.

When these types of market conditions exist, it is typical for land values to rapidly increase around the new development, while stagnating or even declining around the older commercial development. This trend can also be evidenced in the rent levels for commercial buildings. This is why older style strip shopping centers may decline in value when newer style enclosed facilities are opened in an area.

The only way to measure land values is to analyze recent market transactions in all areas on a consistent unit rate basis. The unit rate of choice for this type of property is normally the price per acre or the price per square foot dependent upon property size. Price differentials related to size are normal, with smaller sites tending to sell for higher unit rates than larger sites.

Properties in transitional use areas, such as areas along commercial corridors which were previously residential but are gradually changing to commercial, must be treated with particular care to maintain value equalization. This may mean that the residual value of an existing residential structure may have to be significantly reduced to offset the increasing commercial land value. At some point, when the demand is great enough, the older non-commercial improvements may in fact have a negative value. Close attention to current market transactions is the only determinant which is applicable for this condition.

In recent years, many localities have witnessed a trend for revitalization of older 'Down Town' commercial districts, reversing the exodus of commercial properties from the older areas out to the more modern developing traffic corridors. This condition is easily evidenced by an increase in the level of renovations of older structures as well as the opening of new 'Boutique' style commercial stores and offices. As this trend increases, there should be an associated increase in the number of sales relative to the increased demand. Because of the concentration of development in this type area, it may be necessary to rely upon a land residual type analysis to derive the appropriate land value from the improved sales. Keep in mind however, that due to the small size of the individual sites the unit rates can easily be elevated.

As with any valuation problem, the basis for land value can only be derived from an analysis of recent sales. Once established, it is further necessary to maintain equity of unit values locally to ascertain equalization and consistency. Because size is a critical property characteristic for commercial property usage, this is a key element to be considered in valuing like sized properties. Adjustments must also be made to other property characteristics such as shape, ingress/egress, depth, frontage, etc.

For purposes of valuation of future post reassessment development, the assessor must keep in mind that market conditions may significantly change due to the development of more market desirable usages, and this may result in increasing sales prices. The assessor must be cognizant of the effect these changes have on current values however, and realize that such new development may result in a decrease in the value of older competing sites. Care must be taken to ascertain fairness and equity of valuation by a thorough review of similar size and style properties. This is the same procedure used for the valuation of new residential sites and the process is comparable for commercial site.

Waterfront Land Value Guidelines

The value of waterfront properties in localities with major recreational water access and shoreline development, is a significant component of the overall land value as determined by the reassessment. There are numerous factors which go into the assessment of this type of property which preclude any type of 'Cookie Cutter' approach to valuation. The following is a list of some factors which were considered in the determination of value.

1. **Depth of Water at Shore:** This is an important property characteristic having the most significant effect upon value. Deeper water allows larger watercraft direct access to the property.

2. **Shallow Water/Mud Flats:** As above, access by watercraft and recreational use of the property shoreline has a direct effect upon value and must be considered. Extended Piers can offset this factor however depth of water at Low Tide must be considered regardless of Piers.

3. **Point Lots/View:** Analysis of waterfront market sales has indicated a significant value differential related to this factor. Coupled with the depth and access issues outlined above the sales tend to indicate much higher prices for lots having expansive views. Lots in secluded cove and river settings which do not have 'expansive' views will not command the same level of market value.

4. **Tidal Marsh Frontage:** This factor will significantly reduce the recreational use and access of the water frontage for any given property as noted in 2

above. Further restrictions may be placed upon the property due to environmental regulation etc. These restrictions must be considered individually.

5. **Water Access Restrictions:** Numerous restrictions to water navigation exist which can have a direct bearing on the desirability of any given lot regardless of view, depth, or other factors as outlined herein. Typically, lots which provide access for larger water craft will command higher market values. Low water highway bridges downstream may affect the size of watercraft which can gain access to the subject site. Tide conditions may affect this factor also so each situation must be considered on an individual basis.

6. **Frontage/Shape/Configuration:** The size and shape of any given site will have a major impact upon its market value. The actual size of the shore line frontage, provided the lot is not too narrow, can have a major bearing on the usage of the lot and/or its development potential. This factor will vary on an individual lot basis and may result in value differential between lots in any given area.

7. **Vehicle Access:** Many of the properties having waterfront access are situated on dirt and gravel lanes and road which may or may not have public maintenance. Because many of these properties are used for recreational purposes, vehicle access is not considered to have a major impact on the value so long as access is reasonable.

8. **Utility Availability:** A key consideration in determining the viability of a waterfront lot for use as a developed site is the probability of the landowner being able to secure the appropriate permissions for the necessary water and sewer utilities. Often, waterfront properties have great difficulty in finding suitable sites to install septic systems. While there is a growing number of

'engineered' systems making formerly not developable lots usable, the excessive cost involved with these systems must be considered.

9. **Location:** The various factors outlined above all have an impact upon value and must be considered in conjunction with the numerous market sales on an individual basis by location. There is no clear cut formula which can be applied to waterfront properties in general, all such properties must be valued from the prospective of local sales, market conditions, etc.

Manufactured Housing Valuation Method

Determine if **Single Wide** or **Double Wide**

Determine **Box Size** (Length & Width)

Determine **Year Built**
(if using **Age** make Year Built relative to effective year of reassessment)

Determine Condition **Good (G), Average (A), Fair (F), Poor (P)**

Determine if unit has Central A/C - **Y/N**
(if unit has A/C, rate for A/C is added to base rate)

Value Methods :

Unit Rate per Sq. Ft. (Rate from Table)
Fair Value (Value determined in field by visual inspection etc.)
Over Ride Rate (Rate per Sq. Ft. by user **Not** from table)

Note: If using Over Ride – A/C, Condition, & Depreciation are not considered.

Explanation of Condition Adjustment

Condition adjustments are similar to 'Factor' adjustments for typical dwelling units. Base rate is adjusted using following chart to reflect the observed condition and quality. This is a subject adjustment and is based solely on opinion of Assessor at time of inspection.

Good Condition	**+.15**
Average Condition	**No adjustment**
Fair Condition	**-.15**
Poor Condition	**-.25**

Note: Condition adjustments can also be modified using the **Additional** adjustment factor field. This allows the Assessor to adjust the unit factors positively or negatively where appropriate.

Explanation of Depreciation

Table Method – Standardized table based on age. System assumes **-10%** for year 1 and **-3.5%** per year for years 2 to 20. If Age is Greater than 21 then Depreciation is capped at **80%.** If the remaining **20%** value is less than the **Minimum Value** then final value is the minimum value.

Override Method - This allows the Assessor to assign the Depreciation based upon the Observed Condition. This method is used when the unit is considered to be in better or worse condition than would be used via standard depreciation rate table.

Other Improvements

Please note that some localities assign the value of structural attachments (Porches, Decks, etc.) to the Land, and some assign the value of these items to the manufactured housing unit value. The value for these items are normally based on the standardized rate tables used for the residential structural elements. Because these items are considered attachments to the manufactured housing unit, they are inventoried and valued as if they are a detached structure. The condition and depreciation for these items must be field assigned by the Assessor. Also, note that the unit value rate can also be field assigned and will not necessarily have to be derived from a standardized rate table. This allows for the valuation of sub-standard structural elements. There is a Unit Rate limitation for the valuation of structural elements. If the unit rate is less than the limit, then the value method is based on the size (length x width) a the unit rate. If the rate exceeds the Unit Rate limit, then the value us assumed to be a 'Lump Sum' or whole unit value.

Similarly, the values for detached structures such as 'Detached Garages' etc are sometimes assigned to the manufactured housing unit rather than land. Typically, the value for these items are established by the Assessor at the time of inspection and will be based upon the contributing marginal value of the structure. Again condition and depreciation must be field assigned by the Assessor. The unit rate limit noted above also applies to these types of detached structures.

Valuation Example

Orange County 2007 base Manufactured Housing Rates

Single Wide Rate	$ 28.00/sf	A/C Rate	$ 2.25/sf
Double Wide Rate	$ 38.00/sf	Minimum Value	$ 250.00

Unit Rate Limit - $ 99.00

Valuation Example - Single Wide 14 x 70, Age 5 years,
Condition Good with +5 Additional Factor
Central Air Conditioning, Porch 10 x 15 @ $12.00/sf w/ 10% depreciation

14 x 70 = 980 sf @ $ 30.00	29,400	
A/C 980 sf @ 2.25	221	
Base Value	29,621	
Condition Good (+.15) = Factor Adjustment (+.05) =	35,545	(29,621 x 1.20)
Depreciation 5 years = .24 (1 yr @ 10% + 4 yr @ 3.5%)	8,531	(35,545 x .24)
Depreciated Value	27,014	(35,545 – 8,531)
Porch 10 x 15 @ $ 12.00 less 10%	1,620	(150 sf x 12.00/sf – 10%)
Final Value	28,600	(rd)

The same valuation procedure will apply to Double Wide Manufactured Housing units. The size will of course be larger, and the Unit Rate will be more. The remainder of the methodology is the same.

Note to Citizen Review Boards

As noted above, the valuation model used to determine value for a general reassessment project is in fact a frame work upon which sales can be analyzed, rate tables can be built, and individual properties can be valued. By adhering to the value model, coupled with the rate tables which were developed from the sales analysis using the value model frame work, the final value determination for any individual property can be correlated to the local market data.

Citizen review boards provide a very good service to their respective localities. A Board of Assessors typically works closely with the Assessors conducting the General Reassessment, and has a much better understanding of the reasoning behind the myriad valuation decisions which were made during the course of the project. They are also much more familiar with the sales used during the project and how those sales affect the local market conditions in their respective jurisdictions. A Board of Equalization however takes office **after** the reassessment project has been completed, and in many cases is unfamiliar with the details of the valuation model and how the sales have been analyzed in accordance with the model frame work. In the past, this has led to situations where a Board of Equalization has unknowingly negated an important aspect of a value model because of their lack of understanding of the process. Accordingly, this document has been prepared to provide some understanding and guidance to Citizen Review Boards.

An appraisal is by definition, an opinion or estimate of value. One thing that will become clear as you conduct the review hearing process, is that everyone has an 'opinion' about value, and the assessment process.

It is important to keep in mind that because the entire valuation process is made using the value model as a guide, all aspects of the model tend to have a symbiotic or mutually dependant relationship. If a review board, especially a Board of Equalization, has a disagreement with the model and decides to arbitrarily eliminate any one item from the model, then the entire rate structure would have to be adjusted to compensate for this action. Otherwise the final value determinations would be artificially low relative to the sales.

A review of the **Manual For Local Boards of Equalization** prepared by the Virginia Department of Taxation finds that "In the exercise of its duties the **board of equalization cannot:** 3) Make overall (blanket) increases or decreases in assessments for a locality. And 9) Change the method of valuing a class of property."

Thus, if a Board of Equalization should decide to arbitrarily change the value for a specific type or class of Land throughout an entire jurisdiction, it would in effect negate the value frame work as determined by the analysis of the local market sales. This is not to say that the Board of Equalization cannot make changes to the land value of specific properties, however such changes should be made based upon direct comparison of parcels with specific emphasis given to value equalization of similar properties.

Similarly, once the value for Wells, Septic Systems, Public Water, and Public Sewer hook ups has been determined and uniformly applied where appropriate, the Board of Equalization would be in violation of item 3) above if they were to change these rates. Keep in mind as we have explained above in the section titled **Water & Sewer Utility Value Consideration** that the value of the 'Utilities' has been added to the value of the 'Raw' Land. Further, having established the various unit values for these utility components, the sales were analyzed and the rate structure and value frame work were predicated upon these values. Lowering the 'Utility' rates would then necessitate a corresponding increase in the 'Land Value Component' such that the final Land Value inclusive of the 'Utility' values was the same.

Conclusion: The Board of Assessors and the Board of Equalization play an important role in the General Reassessment Process. The Board of Assessors will provide needed input and oversight during the actual valuation process, and will have the advantage of being involved in the initial value model frame work analysis and the sales analysis and rate table determination. This will allow the Board of Assessors to see how the various rates and procedures are used in the valuation process as the initial valuation process is conducted and reviewed.

The Board of Equalization has the distinct disadvantage of coming into the project after the valuation process has been completed and the Assessors public hearings have been completed. Because of this, the Board of Equalization is often unaware of much of the analysis which has been considered in the development of the value model frame work as well as the rate tables etc. By working within the valuation model frame work, both the Assessors as well as the Board of Equalization will ascertain the fairest and most equitably uniform assessment possible.

To quote again from the **Manual for Local Boards of Equalization** :

> "Obviously if all assessments could be made at 100 percent of fair market value or any other percentage, perfect equalization would be achieved and a local board of equalization would be unnecessary. This is not possible, however, so we must accept that which is reasonable and concentrate on those problems which are most pernicious and for which solutions can be found.
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> Virginia courts have recognized that absolute and perfect equity is not attainable, holding that before relief from assessment can be granted it must appear that the assessment is not only out of line with those of other neighborhood properties which in character and use bear some relation to that of the petitioner but that it is out of line in a general way. It is insufficient to merely show that it is valued at a different rate.
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> Undoubtedly the most common error made by local boards of equalization is the granting of appeasement reductions to property

owners. It is easier, unfortunately, to mollify a few angry and vocal taxpayers than it is to address the more substantive problem of equity in taxation. Furthermore, this type of change is sometimes made at the expense of other changes which need to be made but are not made because no complaint has been lodged. A board of equalization is free to act whether or not a specific complaint had been made and the board has, in fact, a positive duty to correct known erroneous assessments even though no complaint has been made.

Finally, the equalization board member should always bear in mind that there is a legal presumption in favor of (sic) the correctness of a tax assessment and the burden is upon the property owner who questions it to show that the value fixed by the assessor is erroneous. If he has acted properly, the assessing officer should be accorded the full and undivided support of the board. The power of the board of equalization, as all powers, should be applied with caution and tact."

The following is a short listing of applicable Assessment Case Law highlights as listed in the **Manual for Local Boards of Equalization** :

"Uniform method of valuation impossible.--- This section does not prescribe that the valuation of all property for taxation shall be ascertained I the same way or manner. It is not even implied. In the nature of things, it could not be done. The many kinds or species of property with their diverse characteristics render it impossible. *R. Cross, Inc, v. City of Newport News, 217 Va. 202,228 S.E.2d 113 (1976)"*

"It is impractical or impossible to enforce both the standard of true value and standard of uniformity and equality, the latter provision is to be preferred as the just and ultimate end to be attained. But that does not mean that property in any taxing jurisdiction may be assessed in excess of and without relation to its fair market value as required by the Constitution. It means only that a taxpayer whose property is assessed at its true market value has a right to have the assessment reduced to the percentage of that value at which others are taxed so as to meet the uniformity required by this section as well as by the equal protection clause of the Fourteenth Amendment. *Smith v. City of Covington, 205 Va. 104, 135 S.E.2d 220 (1964)."*

"Before relief can be given it must appear that the assessment is out of line generally with other neighborhood properties, which in character and use bear some relation to that of a petitioner. It is not enough to show that it is valued above a rate apportioned to another nearby lot. The inequality must be not only out of line but out line generally. *Southern Ry v. Commonwealth, 211 Va. 210, 176 S.E.2d 578 (1970."*

"There is a presumption in favor of the correctness of a tax assessment and the burden is upon the property owner who questions it to show that the value fixed by the assessing authority is excessive. The effect of this presumption is that even if the assessor is unable to come forward with evidence to prove the correctness of the assessment this does not impeach it since the taxpayer has the burden of proving the assessment erroneous. *Norfolk & W. Ry v. Commonwealth 211 Va. 692, 179 S.E.2d 623 (1973)."*